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*Published in:*  
Nurse Education Today

*DOI:*  
[10.1016/j.nedt.2020.104368](https://doi.org/10.1016/j.nedt.2020.104368)

*Publication date:*  
2020

*Licence:*  
UK Government Non-Commercial Licence

*Document Version*  
Publisher's PDF, also known as Version of record

[Link to publication in Discovery Research Portal](#)

### *Citation for published version (APA):*

Gavine, A., Carson, M., Eccles, J., & Whitford, H. M. (2020). Barriers and facilitators to recruiting and retaining men on pre-registration nursing programmes in Western countries: A systemised rapid review. *Nurse Education Today*, 88, 1-8. [104368]. <https://doi.org/10.1016/j.nedt.2020.104368>

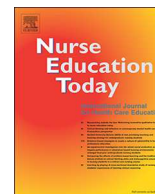
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# Barriers and facilitators to recruiting and retaining men on pre-registration nursing programmes in Western countries: A systemised rapid review

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## ARTICLE INFO

### Keywords:

Nurses, male (MeSH)

Students, nursing (MeSH)

Nursing student recruitment

Unconscious bias

## ABSTRACT

**Background:** The recruitment of men to pre-registration nursing programmes in many Western countries has remained static at approximately 10% per year.

**Aim:** To identify the experiences and attitudes of men on pre-registration nursing programmes in Western countries and the barriers and enablers to their recruitment and retention.

**Design:** Systematized rapid review.

**Methods:** Searches were undertaken in Medline (Ovid), CINAHL (EBSCO) and PsychINFO (EBSCO) databases. Studies in English were included if they were from Western countries, were published since 2000 and related to men's experiences of, or attitudes to, applying for or studying pre-registration nursing. Included papers were quality appraised and findings were thematically analysed and presented in a narrative synthesis.

**Results:** Records were de-duplicated and 2063 records were screened and 44 articles assessed for eligibility of which 23 articles relating to 22 empirical studies were included in the review. Findings were categorised into the following themes: recruitment experiences/reasons for studying nursing; gender experiences; barriers, difficulties and challenges with programme; and factors affecting retention.

**Conclusion:** Evidence suggests that many men who come into nursing have a family member or acquaintance who is a nurse or that they have had contact with a male nurse as a patient or carer. Motivating factors such as financial security, career mobility and the opportunity to have a job in a caring profession were reported. Improved career advice at school is needed and shortened graduate programmes could be attractive. On programme, some clinical areas were easier for male students, while in others, treatment refusal could cause difficulties. Being in a minority and gender stereotyping can affect experiences. Ensuring equitable treatment, providing additional support and placements in clinical areas with more men could minimise these challenges.

## 1. Introduction

The shortage of nurses is a global problem (Drennan and Ross, 2019). The World Health Organization (WHO) estimates that nurses and midwives constitute 50% of the shortfall in healthcare professionals, which equates to approximately nine million nurses and midwives (WHO, 2016). This shortage is due to many factors including an aging population, aging workforce, burnout and a high proportion of females who are currently more likely to take career breaks or work part-time (Haddad and Toney-Butler, 2018). One solution to address this shortage is the recruitment of more men, who currently only constitute a small proportion of students on

pre-registration programmes. For instance, in Scotland only 8–10% of students on pre-registration nursing programmes are male (Scottish Government, 2017). In the USA it is slightly higher at 15% (National League for Nursing, 2014), which may be associated with having a national nursing association specifically for men and national campaigns like the 20 × 20: Choose Nursing campaign which began in 2011 (Olin, 2011). Consequently men are significantly under-represented in the workforce, with men only accounting for 9–11% of the workforce in the UK (Nursing and Midwifery Council, 2017), Australia (Nursing and Midwifery Board of Australia, 2019), New Zealand (Nursing Council of New Zealand, 2017) and the USA (Auerbach et al., 2017).

DOI of original article: <https://doi.org/10.1016/j.nedt.2019.104234>

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<https://doi.org/10.1016/j.nedt.2020.104368>

Received 4 April 2019; Received in revised form 19 December 2019; Accepted 7 February 2020

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In addition to addressing the shortage of nurses, increasing the number of men in the profession can confer additional benefits, not least because a public service profession should more closely reflect the gender balance of wider society. Moreover, gender diversity can lead to positive changes in organizations as it enables differences in leadership styles and draws upon different values and behaviours (Brody et al., 2017). Finally, by having a larger talent pool on which to draw, the best candidates can be recruited which will ultimately enhance the profession and improve patient care (Flaskerud and Halloran, 2018).

The lack of men in nursing is a longstanding problem and is arguably attributable to the feminisation of nursing as a career which has resulted in stereotypes and gender biases that deter men from applying (Ross, 2017). Policy is now attempting to address this, with the Scottish Funding Council (SFC) setting a target of an imbalance of no greater than 75: 25 by 2025 (SFC, 2016). NHS Education for Scotland commissioned work to identify the influences and causes of under-representation of men in pre-registration programmes and develop strategies to address these issues. There are higher rates of attrition of male students from UK nurse education programmes therefore retention should also be a focus when developing strategies designed to increase the number of men in the profession (Mulholland et al., 2008; Prymachuk et al., 2009; Whitford et al., 2018). The first phase of this work entailed a systemised rapid review and was followed by qualitative work exploring male students' experiences of pre-registration nursing programmes (ref to sister paper). This paper presents the systemised rapid review of the literature which was undertaken to identify barriers and enablers to the recruitment and retention of men on pre-registration nursing programmes.

## 2. Aim and review questions

The aim of this systematic review was therefore to identify the experiences and attitudes of men on pre-registration nursing programmes and the barriers and enablers to both recruiting men to pre-registration nursing programmes and the retention of men on such programmes. For the purpose of this review, nursing includes adult nursing, child nursing, midwifery, mental health nursing or learning disabilities nursing where programmes were not generic in nature. Nursing programmes can range from two years (such as the United States' associate degree in nursing) to three or four years in length so no restrictions were placed on programme length. Midwifery was included because the gender imbalance is more pronounced, with men accounting for under 1% of the workforce in Scotland (Martin, 2017). More specifically, the aim of the review was addressed through the following research questions:

1. What are the barriers and enablers to recruiting men to pre-registration nursing programmes?
2. What are the experiences of men on pre-registration nursing programmes during time in the classroom and while on clinical placements?
3. What are the barriers and enablers to retention on pre-registration nursing programmes?

## 3. Methods

A rapid review was carried out because the work had to be completed in a short period of time with limited resources.

### 3.1. Information sources and search strategy

A search strategy was developed and carried out in the following databases: Medline (Ovid), CINAHL (EBSCO) and PsycINFO (EBSCO). A combination of free-text and thesaurus terms specific to each database was applied to the following search architecture (see supplementary file for full search strategy):

- Terms related to men in nursing AND

- Terms related to attitudes, barriers and enablers AND
- Terms related to research design

The search was limited to studies published in English, performed in December 2017 and updated in July 2019.

Reference lists of all included studies were examined for additional studies that may not have appeared in the database search

### 3.2. Eligibility criteria

Studies were included in the review if they examined men's experiences and/or attitudes to pre-registration nursing education and/or men's experiences of applying for pre-registration programmes. In the case that studies included both male and female students, studies were included only if the data from male participants could be separated from female participants. This included all branches of nursing and midwifery outlined previously. Any type of qualitative or quantitative primary study was eligible for inclusion provided it reported empirical methods and results. Studies could either be published (i.e. in academic journals) or unpublished (i.e. dissertations).

As this review was undertaken to inform the work of NHS Education Scotland, studies were only eligible for inclusion if they were conducted in countries with a similar Western culture (i.e. Europe, North America, Australia and New Zealand). The rationale for this was to focus on health services provided in High-Income countries and countries with a culture broadly similar to Scotland in terms of the position of men and women in society and organization of the education and the workforce. For instance, in many High-Income Arab countries, the majority of nurses are foreign nationals (Elbarazi et al., 2017).

Studies not published in English or published before 2000 were excluded.

### 3.3. Study selection

All study records identified from the database search were exported into Endnote Reference Management Software and duplicates removed. The titles and abstracts of all identified records were screened by one reviewer to preserve efficiency of this rapid review. The full texts of any studies potentially meeting the inclusion criteria were retrieved and then independently screened by two reviewers. In the case that the two reviewers disagreed, a third reviewer was consulted. Similarly, to ensure no relevant studies were omitted the full-texts of any additional studies identified from reference lists of included studies were screened independently by two reviewers.

### 3.4. Data extraction

A data extraction form was developed to extract the following information: study aim; geographical setting; context (when information available this included details of the programme and percentage of male nursing students); study design; analysis; participant details; and study findings. For qualitative studies, findings were considered to include direct quotes as well as the study author's interpretation of the data. This information was summarised in the data extraction table (Table 1). For quantitative data this included raw data and/or results of any statistical tests.

### 3.5. Critical appraisal

A critical appraisal tool appropriate for each study design (quantitative, qualitative and mixed-methods studies) was used. The Appraisal tool for Cross-Sectional Studies (AXIS) was used for cross-sectional quantitative questionnaire studies (Downes et al., 2016). For qualitative studies the Critical Appraisal Skills Programme (CASP) qualitative checklist was used (CASP, 2017). Finally the Mixed Methods Appraisal Tool (MMAT) was used for mixed methods studies (Pluye and Hong, 2014).

**Table 1**  
Summary of characteristics of included studies.

Author	Year	Aim	Setting	Study design	Participants
Anderson	2014	To explore the learning environment between faculty and male undergraduate nursing students	USA	Qualitative - observations, interviews and document analysis	Male (n = 2) and female (n = 34) nursing students. Faculty members (n = 3). Age range: 22–52.
Bartfay	2007	To examine current attitudes and perspectives regarding men enrolled in nursing as described	Canada	Cross-sectional study using the PAMINE (Perceived Acceptance of Men in Nursing Education) survey	Male nursing students (n = 14). Mean age = 26 Female nursing students (n = 173). Mean age = 23
Bartfay	2010	To examine societal perceptions and attitudes to men nursing reported by male and female nursing and non-nursing students	Canada	Cross-sectional survey	Male nursing students (n = 12). Mean age = 28.9 Female nursing students (n = 70). Mean age = 21.8 Non-nursing male students (n = 36). Mean age = 23.9 Non-nursing female students (n = 31). Mean age = 21.6
Bell-Scriber	2008	To examine differences between male and female nursing students' perceptions of education	USA	Qualitative – semi structured interviews	Male traditional age college students (aged 20–22; n = 4) Female traditional age college students (aged 20–22; n = 4)
Carnevale	2018	To identify factors, both positive and negative, that affected male students as they chose, applied, and remained in their undergraduate nursing programs.	USA	Qualitative – focus groups	Undergraduate male nursing students in their third (n = 6) and final year (n = 5).
Christensen	2014	To examine the experience of men “training” to be registered nurses	New Zealand	Qualitative – semi-structured interviews	Male nursing students (n = 5). Mean age = 25
Christensen	2018	To explore the lived experience of male nursing students throughout the undergraduate programme and their experiences of what attracted them to nursing as a career choice.	Australia	Qualitative - interviews	Male nursing students (n = 8). Mean age = 36
DeVito	2016	To explore male students' experiences in a nursing programme	USA	Qualitative – written accounts	Undergraduate male nursing students (n = 23)
Ellis	2006	To explore male students' experiences in a nursing programme	USA	Qualitative – interviews	Male nursing students (n = 13). Age range described as early 20s to late 30s.
Harding	2017	To examine male student's reasons for undertaking a nursing degree	New Zealand	Qualitative – semi structured interviews	Male nursing students on a graduate programme (n = 8). Age range 23–39.
Ieradi	2010	To explore male students' experiences in a nursing programme	USA	Qualitative – semi structured interviews	Male students (n = 7). Age range 23–47.
Kermode	2006	To explore perceived prevalence of sexism in nursing programmes (compares with non-nursing programmes)	Australia	Cross-sectional survey	Nursing (n = 55) and non-nursing students (n = 166). NB 33% of the nursing student participants were male.
McKenna	2016	To examine characteristics of males entering one accelerated graduate entry masters pre-registration nursing program	Australia	Cross-sectional survey	Male and female on the graduate entry Master of Nursing programme (n = 145). 30% of respondents were male. Age range was 21–56.
Meadus	2011	To explore male students' experiences in a nursing programme	Canada	Qualitative – focus groups	Male nursing students (n = 27). Aged between 20 and 38.
Muldoon, McLaughlin	2003, 2010	To examine how gendered views of nursing influence student nurses' career progression	Northern Ireland	Cross-sectional questionnaire with follow-up attrition data	Male nursing students (n = 34) Female nursing students (n = 350) Mean age of all students = 20.7
O'Lynn	2004	To identify prevalence and perceived importance of barriers in nursing programmes	USA	Cross-sectional survey	Male members of the American Assembly of Men in Nursing (n = 64). Mean age at graduation = 29.8 Current licenced male registered nurses in Montana (n = 47). Mean age at graduation was 29.9
Mitra	2018	To describe the experiences of a sample of nursing students who are men before, during, and after their obstetric rotations	Southeastern USA	Qualitative - interviews	Male student nurses (n = 7).
Powers	2018	To explore the lived experience of former male nursing students	Southeast USA	Qualitative – semi-structured interviews	Males formerly enrolled in a pre-licensure, baccalaureate nursing program (n = 11). Age range was 20–40+ years with 55% aged 20–29 years. 73% were white, non - Hispanic. 36% had received a prior degree.
Smith	2006	To explore challenges faced by male mature students in a nursing programme	USA	Mixed methods: cross-sectional survey and semi-structured interviews	Mature male students over 25 years (n = 29 for questionnaire and n = 6 for interviews). Age range 26–60.

(continued on next page)

Table 1 (continued)

Author	Year	Aim	Setting	Study design	Participants
Stott	2006	To investigate factors influencing both the academic and clinical practice performance of undergraduate male nursing students	Australia	Qualitative interviews	Male Bachelor of Nursing Students (n = 8). Age range 21–53.
Tillman	2006	To describe the meaning of masculinity for recent male baccalaureate nursing program graduates	USA	Qualitative – semi-structured interviews	Recent male nursing graduates (n = 8).
Wilson	2014	To explore the experience of males in a nursing school and some strategies at the local university level to encourage recruitment and retention of males in nursing.	Australia	Qualitative interviews	Male UG nursing students (n = 10). Mean age 30.2 (range 21–40).

### 3.6. Data synthesis

The findings from both quantitative and qualitative studies were analysed thematically and presented in a narrative synthesis. After extracting all data on study findings a coding frame was developed and findings were then categorised into the following four themes: recruitment experiences/reasons for studying nursing; gender experiences; barriers, difficulties and challenges with programme; and enablers and positives of the programme. The themes were then explored for contradictory cases or contextual information which might explain differences in responses.

## 4. Results

### 4.1. Search results

The initial database search produced 1936 citations after de-duplication and 122 further citations following the updated search. In addition the search of the reference lists of included studies identified an additional five citations reporting on four distinct studies. Thus a total of 2063 titles and abstracts were screened. Of these, 2012 were excluded as they did not meet the inclusion criteria. The primary reasons for exclusion at this stage were that the article did not report original empirical research, the article focused on the experiences of men working as registered nurses or the topic was unrelated to the research question. The study selection process is outlined in Fig. 1.

Of the 46 full-text papers eligible for retrieval identified by the database search, two could not be accessed (Sedgwick and Kellett, 2015; Cox, 2017). Thus a total of 44 full text articles were screened and from these a total of 19 met the inclusion criteria. The remaining 25 studies were excluded for the following reasons: not conducted in a Western country ( $n = 10$ ); not an empirical study ( $n = 6$ ); focused on experiences of men working as nurses ( $n = 5$ ); participants were psychology students ( $n = 1$ ); focused on gender bias in marking ( $n = 1$ ); focused on the gender pay gap in nursing ( $n = 1$ ). Also of note is one additional study that was conducted in the UK and described an ongoing study. As the full results were not available, this study was also excluded from the review (Whittock and Leonard, 2003). In addition, the full-texts of the five studies identified from reference lists were also sought. The full-text for one of these records could not be obtained (Baker, 2001), however, the other four citations for three distinct studies did meet the inclusion criteria. Thus a total of 23 records reporting on 22 distinct studies were included in the review.

### 4.2. Characteristics of included studies

All of the included studies were conducted in English speaking countries. However, only one study (reported in two papers) was conducted in the UK (Muldoon and Reilly, 2003; McLaughlin et al., 2010). Almost half of the studies ( $n = 11$ ) were conducted in the USA (O'Lynn, 2004; Smith, 2006; Bell-Scriber, 2008; Ierardi et al., 2010; DeVito, 2016; Anderson, 2014; Ellis et al., 2006; Tillman, 2006; Carnevale and Priode, 2018; Mitra et al., 2018; Powers et al., 2018). The remaining studies were conducted in Australia (Wilson, 2005; Kermode, 2006; Stott, 2007; McKenna et al., 2016; Christensen et al., 2018), Canada (Meadus and Twomey, 2011; Bartfay et al., 2010; Bartfay and Bartfay, 2007); and New Zealand (Harding et al., 2017; Christensen and Knight, 2014).

Over half of the included studies only included male nursing students and specifically aimed to explore men's experiences of nursing programmes (Carnevale and Priode, 2018; Christensen and Knight, 2014; Christensen et al., 2018; DeVito, 2016; Ellis et al., 2006; Harding et al., 2017; Ierardi et al., 2010; Meadus and Twomey, 2011; Mitra et al., 2018; Powers et al., 2018; Smith, 2006; Stott, 2007; Wilson, 2005). A further two studies included registered male nurses, however, as the focus was on their pre-registration nursing education they were

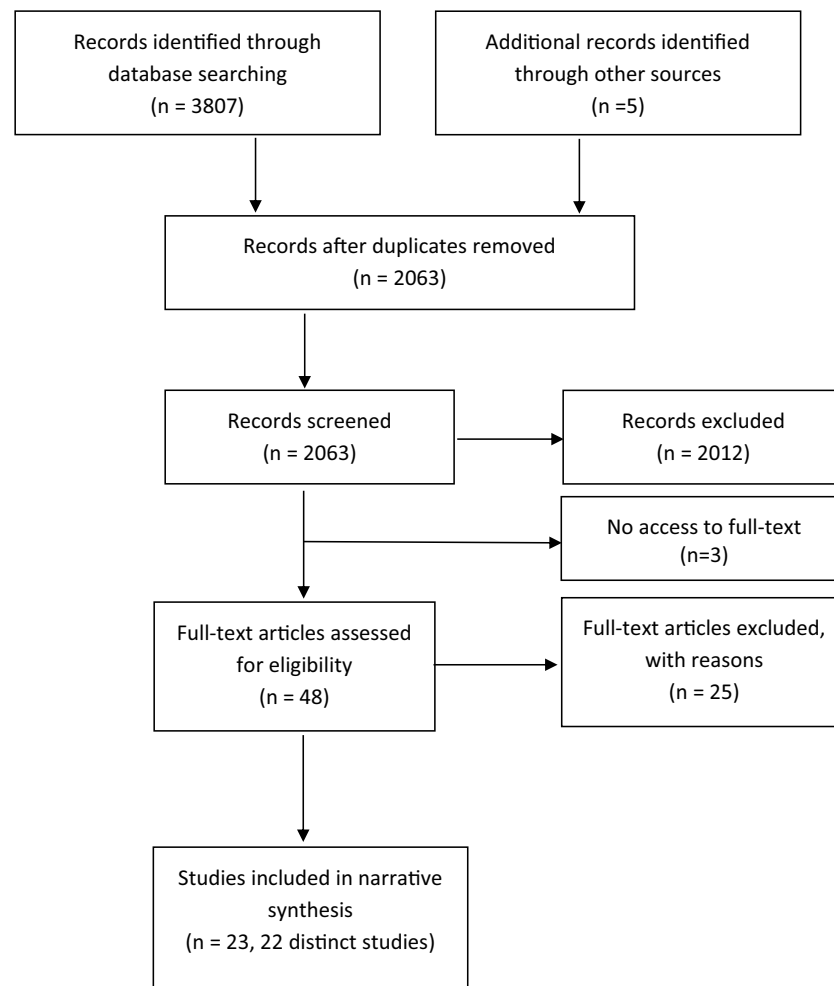


Fig. 1. Study Selection Process.

included in the study (O'Lynn, 2004; Tillman, 2006).

Five studies (reported in six papers) included male and female nursing students and either considered both male and females' experiences of education or motivations to study nursing (Anderson, 2014; Bell-Scriber, 2008; McKenna et al., 2016; McLaughlin et al., 2010; Muldoon and Reilly, 2003). Bartfay and Bartfay (2007) explored attitudes towards male nurses in male and female nursing and non-nursing students and (Kermode, 2006) included male and female nursing and non-nursing students to examine perceived sexism in university programmes.

The majority of studies were focused on undergraduate pre-registration programmes, however, some of the students on these programmes already held degrees. Two of the more recent studies specifically focused on pre-registration post-graduate programmes (Harding et al., 2017; McKenna et al., 2016) with McKenna et al. (2016) reporting that 30% of students. No studies specifically looked at the experiences of men on midwifery, child nursing or health visiting programmes.

#### 4.3. Study design

The majority of included studies utilised qualitative designs to explore experiences of nursing students. This generally took the form of interviews (Anderson, 2014; Bell-Scriber, 2008; Carnevale and Priode, 2018; Christensen and Knight, 2014; Christensen et al., 2018; Ellis et al., 2006; Harding et al., 2017; Jerardi et al., 2010; Mitra et al., 2018; Powers et al., 2018; Stott, 2007; Tillman, 2006; Wilson, 2005).

However, in some cases focus groups (Meadus and Twomey, 2011) or written accounts (DeVito, 2016) were used.

Studies conducted cross-sectional surveys to either identify the prevalence of barriers to men in nursing (Kermode, 2006; O'Lynn, 2004), examine characteristics of men entering nursing programmes (Harding et al., 2017; McKenna et al., 2016), examine attitudes to men in nursing (Bartfay and Bartfay, 2007; Bartfay et al., 2010) or examine how gender can influence career progression (Muldoon and Reilly, 2003; McLaughlin et al., 2010).

#### 4.4. Critical appraisal

The qualitative studies were generally of an acceptable standard, however, only one study (Tillman, 2006) scored 'yes' for all the domains on the CASP tool. The most common issues were a lack of consideration of the relationship between researcher and participants (12/15 studies) and inappropriate recruitment strategy (10/15 studies).

The cross-sectional studies were generally judged to be of a low standard using the AXIS tool. The main issues were lack of justification of the sample size (7/7 studies); lack of categorisation and information about non-responders (identified as issues in all studies); insufficient description of the statistical methods (5/7 studies); concerns about response rates (5/7 studies); using non-validated measurement tools (4/7 studies) and lack of information on internal consistency of measurement tools (4/7 studies).

The one mixed-methods study was judged to be of a high standard using the MMAT tool (Smith, 2006).



## 5. Discussion

The findings of the studies were thematically analysed and synthesised to answer each of the three review questions and are discussed below.

### 5.1. What are the barriers and enablers to recruiting men to pre-registration nursing programmes?

Evidence from the included studies suggests that many men who come into nursing have a family member or acquaintance who worked as a nurse (DeVito, 2016; Harding et al., 2017; Meadus and Twomey, 2011; O'Lynn, 2004; Tillman, 2006; Wilson, 2005). Alternatively, men might have come into contact with male nurses either as a recipient of care or as the family member of a care recipient (Ellis et al., 2006; McKenna et al., 2016; Wilson, 2005) or through previous employment (e.g. in the military or another healthcare role) (Christensen et al., 2018; Ellis et al., 2006; Harding et al., 2017; Tillman, 2006). Many of the men had had a previous career and were not school leavers (Christensen et al., 2018; Wilson, 2005). Indeed, men felt there was a lack of school leavers on the programme and this was reflective of failures of school counsellors to suggest nursing, negative peer pressure and a bias in favour of male dominated professions (Meadus and Twomey, 2011; Smith, 2006; Wilson, 2005). Indeed, Powers et al. (2018) reported exposure to male nurses during high school was instrumental to some participants' decision to go into nursing. However, it should be noted that societal influences were not restricted to school leavers with more mature students also identifying this as an issue (Bartfay et al., 2010; Christensen et al., 2018; Harding et al., 2017; Meadus and Twomey, 2011; Smith, 2006; Wilson, 2005).

Another consistent finding was that men perceived nursing to be a career that provided both financial security and opportunities in terms of career progression and mobility (Christensen and Knight, 2014; Christensen et al., 2018; DeVito, 2016; Ellis et al., 2006; Harding et al., 2017; Ierardi et al., 2010; McKenna et al., 2016; Meadus and Twomey, 2011; Powers et al., 2018; Tillman, 2006; Wilson, 2005). This was of particular importance to men who were experiencing difficulties in seeking employment (Christensen and Knight, 2014; McKenna et al., 2016) or dissatisfied with their current roles and had a desire to do something different (Harding et al., 2017; Christensen et al., 2018). For some Nursing was seen as an opportunity to continue education and challenge themselves (Powers et al., 2018). Another important factor in the men's decision to study nursing was the opportunity to work in what the participants perceived to be a caring profession (Christensen et al., 2018; Harding et al., 2017; Ierardi et al., 2010; McKenna et al., 2016; Meadus and Twomey, 2011; Powers et al., 2018; Stott, 2007; Tillman, 2006).

No evaluations of any strategies designed to increase male recruitment into nursing were identified by the systematic review. However, a number of strategies/enablers were identified by the participants as potentially being of use. First, participants felt the following strategies may specifically help encourage school leavers to apply directly for nursing: support and education for family members and high school counsellors; school visits by male nurses to talk to students; marketing of programmes in an androgynous manner (Wilson, 2005). Secondly, specific to graduates, graduate programmes were viewed as particularly appealing as they tended to be shorter, were more financially attractive and provided an additional qualification (Harding et al., 2017). Thirdly, other strategies to encourage men more generally to apply were reported to be careers fairs that did not specifically focus on female students (Meadus and Twomey, 2011), involvement of men at career open days (DeVito, 2016) or recruitment campaigns directed specifically at men (DeVito, 2016). Finally, as many of the men cited financial security, career mobility and the opportunity to have a job in a caring profession as motivating factors, these could be considered for inclusion in marketing materials.

### 5.2. What are the experiences of men on pre-registration nursing programmes during academic study periods and clinical placements?

The men in these studies reported both positive and negative experiences during academic study periods and clinical placements. In terms of positive experiences, there was some evidence that the participants enjoyed being able to put what they learnt from academic study periods into a practical setting (Wilson, 2005). Other men felt that being male did not hinder their progress (Smith, 2006) and they felt accepted and treated positively on clinical placements (Wilson, 2005). In particular, participants reported feeling more comfortable in clinical placements where more male nurses worked such as accident and emergency or surgery (DeVito, 2016; Powers et al., 2018). Generally, participants in the included studies did not experience issues with treatment refusal from patients. However, occasionally female patients would ask for a female nurse when requiring intimate care, in particular on older women wards (Anderson, 2014; Christensen and Knight, 2014; Mitra et al., 2018; Smith, 2006; Wilson, 2005).

However two areas of clinical practice did consistently raise issues for the male students, with studies consistently reporting that men had difficult experiences during clinical placements on obstetrics and gynaecology wards because of a higher rate of treatment refusal (Anderson, 2014; Carnevale and Priode, 2018; Christensen and Knight, 2014; Ellis et al., 2006; Mitra et al., 2018; O'Lynn, 2004; Powers et al., 2018; Smith, 2006; Stott, 2007; Wilson, 2005). In particular, some participants described feeling anxious that female patients could feel uncomfortable or make accusations about inappropriateness when providing intimate care (Meadus and Twomey, 2011; O'Lynn, 2004). Similarly, some men reported that they could feel uncomfortable in paediatric placements (Meadus and Twomey, 2011).

Christensen and Knight (2014) contrasted this to female students' experiences where it was usually a non-issue when female students provide intimate care for male patients. Importantly this could cause male students more difficulties in identifying patients for performing required competencies as they are not only subject to patient refusal but also competing with female students for learning opportunities.

Several studies reported that during the programme, some men could find being in an all-female environment difficult at times (Meadus and Twomey, 2011; O'Lynn, 2004; Wilson, 2005) and this could result in feelings of isolation (Carnevale and Priode, 2018; Stott, 2007). For some, it gave an insight into what it was like being the non-dominant person in society (Carnevale and Priode, 2018). Conversely, some men felt female classmates perceived it as an advantage to have a male student as part of their study group (Carnevale and Priode, 2018).

Being in the minority also meant that men experienced disproportionate burden of some roles. During theory placements men could feel pressured to act as a simulated patient by other students and teaching staff, in particular for sessions where the chest was exposed (Anderson, 2014; Stott, 2007; Wilson, 2005). Whereas during clinical placement they were considered to be "muscle" and their role was to undertake heavy lifting (Carnevale and Priode, 2018; Meadus and Twomey, 2011; Powers et al., 2018). However, some men viewed this as a positive as it created a sense of feeling valued (Carnevale and Priode, 2018).

Wider gender stereotypes could also play a role in contributing to negative experiences. In particular, some men reporting feeling that some female nurses or wider society viewed them as less caring or in a negative manner (Bartfay and Bartfay, 2007; Meadus and Twomey, 2011; O'Lynn, 2004; Powers et al., 2018; Stott, 2007; Wilson, 2005). In addition, male nursing students were occasionally mistaken for being medical students (Anderson, 2014; Ierardi et al., 2010; Meadus and Twomey, 2011; Powers et al., 2018; Stott, 2007). Some studies reported that the programme generally had a feminist bias which could lead to feelings of discrimination for some students (Bell-Scriber, 2008; Kermode, 2006; O'Lynn, 2004). Finally, some men reported an assumption amongst staff that male students will go on to postgraduate training and specialist roles (Carnevale and Priode, 2018).

### 5.3. What are the barriers and enablers to retention on pre-registration nursing programmes?

Enablers to retention could be broadly divided into enablers that could be implemented by the university and wider enablers (external to the university). University based enablers could then be further divided into the following categories: attitudes and behaviours of university/clinical staff; peer relationships; and programme structure. First, this could include ensuring students received support and positive feedback for faculty, clinical staff or patients (Ierardi et al., 2010; Meadus and Twomey, 2011; Wilson, 2005) and equitable treatment by faculty (Anderson, 2014). In one study, participants felt that their university had a genuine acceptance of male students and this was evidenced by the university's attempts to increase the number of male students (Anderson, 2014). Interestingly, students did report that being male could make them feel under the spotlight during theory and clinical placements (i.e. it was noticed if they were not there, tutors were more likely to know their names to ask them questions), however, for some students this was seen as positive as it encouraged them to work harder (Powers et al., 2018). In terms of improving clinical placements, one strategy employed by a lactation consultant was to introduce the student without calling attention to the fact he was a man and this was associated with no refusals (Powers et al., 2018).

Secondly, peer relationships could also play an important role. Having another male student in the class was reported to be of benefit for some students (Carnevale and Priode, 2018; Christensen and Knight, 2014; Meadus and Twomey, 2011; Powers et al., 2018). Similarly, five American studies found that developing positive relationships with female students also acted as an enabler (Anderson, 2014; Bell-Scriber, 2008; Carnevale and Priode, 2018; DeVito, 2016; Ellis et al., 2006). Two Australian studies suggested that opportunities for male discussion/support meetings could be of benefit as this could enable male students to discuss what it is like being a male nurse in a female dominated profession (Stott, 2007; Wilson, 2005).

Finally, men tended to display a preference for more technical and specialised areas of nursing (DeVito, 2016; Ellis et al., 2006; McLaughlin et al., 2010; Powers et al., 2018; Stott, 2007) so clinical placements in these areas could potentially help improve experience and facilitate retention. In addition, Harding et al. (2017) specifically looked at shortened postgraduate programmes and identified that the male participants particularly enjoyed the challenge of a postgraduate programme and being able to undertake a shortened programme was a strong motivating factor.

Despite many of the men from these studies reporting positive experiences, McLaughlin et al. (2010) identified that men from a university in Northern Ireland were more likely to withdraw from the programme than women (28.1% versus 10.7%). Again barriers could be divided into barriers related to the university and wider barriers.

Specific to the university, some men reported that negative staff attitudes towards men and behaviours could have an adverse impact on their experiences on programme (Bell-Scriber, 2008; O'Lynn, 2004). In addition, programme materials could be gender biased as evidenced through exclusive use of women in textbooks and gender stereotyped language (Anderson, 2014; Bell-Scriber, 2008; Carnevale and Priode, 2018; Christensen and Knight, 2014; DeVito, 2016; Ellis et al., 2006; Ierardi et al., 2010; O'Lynn, 2004; Powers et al., 2018; Smith, 2006). In addition, one study reported that male students could have more difficulties with the high volume of reflective writing on many nursing programmes (Christensen and Knight, 2014). Other commonly reported issues included a lack of male faculty or role models on clinical placement (DeVito, 2016; Ellis et al., 2006; O'Lynn, 2004; Powers et al., 2018; Smith, 2006; Stott, 2007) and lack of other males on the programme (Anderson, 2014; DeVito, 2016; O'Lynn, 2004). As noted previously, this could lead to students feeling different or standing out and

for some this was viewed negatively and as a barrier as it meant they felt under more pressure to answer questions during class (Anderson, 2014; Christensen and Knight, 2014; DeVito, 2016; Ellis et al., 2006; Meadus and Twomey, 2011; Powers et al., 2018).

External barriers included financial constraints, maintaining a work life balance and difficulties returning to study after a break (Ellis et al., 2006; Smith, 2006; Wilson, 2005). Whilst these can impact on female students too, their impact may be disproportionate for male students who were more likely to be older. Another external barrier included having unsupportive friends or family who would make homophobic or gender stereotyped remarks (Bell-Scriber, 2008; Christensen et al., 2018; DeVito, 2016; O'Lynn, 2004; Powers et al., 2018; Wilson, 2005).

### 5.4. Limitations

As the review only included studies undertaken in English speaking Western countries successful strategies to recruit and retain men on pre-registration nursing programmes in Europe and in other parts of the world will have been missed. The use of a single researcher to review titles and abstracts increases the risk that relevant studies may have been omitted. However, we believe the impact of this will be minimal as research shows that a single reviewer is likely to identify the vast majority of relevant records (Edwards et al., 2002). Moreover, we have attempted to guard against this by checking the reference lists of all relevant studies.

### 5.5. Recommendations for further research and practice

Further research is needed to develop and evaluate strategies to address the barriers identified by this review. Whilst some barriers are out with the control of universities (e.g. pay), there are a number of strategies universities could test including: school visits by male nurses or students; presence of men at career fairs and open days; recruitment materials that include men; and provision of pre-registration graduate programmes. In terms of retention of students a number of potential strategies could also be trialled including: training for university staff to address unconscious bias; university hardship funds; provision of clinical placements matched to area of interest; and increased visibility of male staff to reduce male students' feelings of 'being different'. Of note, was a complete lack of research from the fields of midwifery, child nursing or health visiting. This is perhaps symptomatic of the even smaller proportions of men on such courses. There is a paucity of research projects evaluating strategies to recruit and retain men to nursing and midwifery programmes and this is a clear direction for future research if the gender imbalance in nursing is to be addressed.

## 6. Conclusion

This systemised rapid review identified 22 studies which examined experiences and attitudes of men on pre-registration nursing programmes and the barriers and enablers to both recruiting men to pre-registration nursing courses and the retention of men on such courses. The majority of studies utilised qualitative designs which were of an acceptable quality. The evidence suggested that many men who come into nursing have a family member or acquaintance who is a nurse or that they have had contact with a male nurse as a patient or carer. Motivating factors such as financial security, career mobility and the opportunity to have a job in a caring profession were also reported. However gender stereotyping and being treated differently contributed to negative experiences for some male students while on placement and in the classroom. A number of potential strategies for increasing recruitment and retention of male students were identified, however, these have not yet been empirically evaluated.



## Funding

Commissioned and funded by NHS Education for Scotland (NES).

## Ethical approval

Not applicable.

## Author statement

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## Declaration of competing interest

None declared.

## Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.nedt.2020.104368>.

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